Application No.: 10/705,321
Docket No.: UC0304USNA

REMARKS

The following remarks are responsive to the Examiner's rejection in the Office Action dated July 10, 2007.

Status of the claims

The pending claims are 1-8, and 10-13. Claims 9, 14, and 15 are canceled. Additionally, claims 16-32 are canceled as being drawn to a non-elected invention.

Claims 1 and 11 are independent claims. The remaining claims depend directly or indirectly from those two independent claims.

Claims 1 and 11 are amended for clarity and to recite that the first guest material migrates into a first portion of the organic layer while a second portion of the organic layer is substantially free of the guest material. Support for this can be found throughout the specification, and particularly at page 4, lines 26-38, and Figure 4. No new matter is introduced.

Claim 7 is amended (1) to recite that a substantial amount of the second guest material migrates into the second portion of the organic layer. Support for this can be found throughout the specification, and particularly at page 21, lines 18-33, page 22, lines 18-23, and Figures 3 and 4. Claim 7 is also amended (2) to incorporate the subject matter of original claim 9, now canceled. No new matter is introduced.

Claim 13 is amended (1) to recite that a substantial amount of the second guest material migrates into the second portion of the organic layer. Support for this can be found throughout the specification, and particularly at page 21, lines 18-33, page 22, lines 18-23, and page 25, line 28 to page 26, line 13. Claim 13 is also amended (2) to correct the dependency and (3) for clarity, to incorporate the subject matter of original claims 14 and 15, now canceled. No new matter is introduced.

Specification

The specification is amended on page 1 and page 43 to provide a new title. Applicants' respectfully submit that the title is now descriptive of the invention to which the current claims are directed.

Claims Rejections – 35 U.S.C. § 112

[1] Claims 7 and 13 stand as rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling. The claims have been amended to recite that the second guest material migrates into the organic layer. Applicants respectfully submit that the amendments have overcome the rejection and request that it be withdrawn.

[2] Claim 10 stands as rejected under 35 U.S.C. § 112, second paragraph, as being indefinite with respect to the term "a precision deposition technique". Applicants respectfully traverse this rejection.

The term at issue is defined at page 8, line 36, to page 9, line 3, of the specification as follows:

> The term "precision deposition technique" is intended to mean a deposition technique that is capable of depositing one or more materials over a substrate at a dimension, as seen from a plan of the substrate, no greater than approximately one millimeter. A stencil mask, frame, well structure, patterned layer or other structure(s) may be present during such deposition.

Applicants respectfully submit that this is neither vague nor indefinite and that the precision is defined by the one millimeter limitation. One of ordinary skill in the art would be able to determine which deposition techniques are capable of that level of precision.

Applicants respectfully submit that this rejection has been overcome and request that it be withdrawn.

Claim Rejection – 35 U.S.C. § 102

Claims 1-5, 7, 8, and 11-14 stand as rejected under 35 U.S.C. § 102(b) as being anticipated by Tang et al., U.S. Patent No. 6,048,573 ("Tang"). Applicants respectfully submit that this rejection is overcome or rendered moot in light of the claim amendments and the following remarks.

Applicants' invention, as recited in independent claims 1 and 11, as amended, is directed to a process for incorporating a first guest material into an organic layer, whereby the first guest material migrates only into a first portion of the organic layer, while a second portion is substantially free of the first guest material. Tang discloses a method of making an organic light-emitting device in which a dopant layer is exposed to vapor to cause the dopant to be diffused *uniformly throughout the host layer* (see Tang at column 6, lines 47-53, and FIG. 3C.). Thus, Tang does not teach each and every limitation of claim 1, and therefore, Applicants respectfully submit that Tang cannot anticipate independent claims 1 and 11, and all the claims dependent thereon.

For the reasons given above, Applicants respectfully request that this rejection be withdrawn.

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Claim Rejection – 35 U.S.C. § 103

Claims 6, 9, 10, and 15 stand as rejected under 35 U.S.C. § 103(a) as being unpatentable over Tang et al., U.S. Patent No. 6,048,573 ("Tang") in combination with Applicants' background section at pages 1-4. Applicants respectfully traverse this rejection in light of the claim amendments and the following remarks.

As discussed above, Tang teaches a process in which a dopant is uniformly diffused throughout a host layer. There is no teaching or suggestion in Tang of applying a dopant to only a portion of an organic layer. In the Background section of the current application, a first process for forming a display with full color images is described in which colored inks are applied by ink-jet printing and contained between well structures. A second ink diffusion process is described in which guest materials with conjugated polymers are placed on regions of the active layer. After this step, a diffusion step is performed to drive the guest material from the overlying polymer into the organic active layer. A different process is described using vapor or solid phase diffusion.

None of these processes, individually or collectively, is the same as or suggestive of Applicants' invention. In Applicants' invention, a liquid composition including at least one first guest material is placed over a localized area of an organic layer where the guest material is desired. The liquid medium of the liquid composition forms a solution, dispersion, emulsion, or suspension with the organic layer to convert the organic layer from a substantially solid state to a substantially liquid state. As the liquid medium converts the localized area of the organic layer to a substantially liquid state, the guest material migrates into the liquid organic layer. (see page 11, lines 14-25, and page 21, lines 18-33 of the instant specification)

Based on the teaching of Tang in combination with the background section of Applicants' specification, one of ordinary skill in the art would not know to convert a portion of an organic layer to a substantially liquid state in order for a guest material to migrate therein. Applicant also respectfully submits that neither reference, alone or in combination, fairly suggests or motivates the partial migration as claimed. Thus, Applicants respectfully submit that none of the claims is obvious over Tang in view of Applicants' discussion at pages 1-4.

For the reasons given above, Applicants respectfully submit that this rejection has been overcome and request that the rejection be withdrawn.

CONCLUSION

For all of the foregoing reasons, Applicants respectfully submit that the rejections have been rendered moot or overcome by the foregoing amendments and remarks, and that the pending claims are in condition for allowance. A notice of allowance is earnestly solicited.

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Should there be any questions about the content of this paper or the status of the application, the Examiner is invited to call the undersigned at the telephone number listed below.

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